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PATENT APPLICATION

ATTORNEY DOCKET NO. 200314774-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Aland ADAMS et al.

Confirmation No.: 7916

Application No.: 10/769,371

Examiner: Dieu-Minh T. Le

Filing Date: January 30, 2004

Group Art Unit: 2114

Title: ROUTING COMMUNICATIONS TO A STORAGE AREA NETWORK

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TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 7/26/2007.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

<input type="checkbox"/> 1st Month \$120	<input type="checkbox"/> 2nd Month \$450	<input type="checkbox"/> 3rd Month \$1020	<input type="checkbox"/> 4th Month \$1590
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☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Patent Application

Appellant:	Adams et al.	Confirmation No.:	7916
Application No.:	10/769,371	Group Art Unit:	2114
Filed:	January 30, 2004	Examiner:	Le, D.
For:	Routing Communications to a Storage Area Network		

APPEAL BRIEF

10/01/2007 EAYALEW1 00000037 082025 10769371

01 FC:1402 500.00 DA

200314774-1
Serial No.: 10/769,371

Group Art Unit: 2114

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I. Real Party in Interest

The assignee of the present application is Hewlett-Packard Development Company,
L.P.

II. Related Appeals and Interferences

There are no related appeals or interferences known to the Appellant.

III. Status of Claims

Claims 1-20 are rejected. This Appeal involves Claims 1-20.

IV. Status of Amendments

All proposed amendments have been entered. An amendment subsequent to the Final Action has not been filed.

V. Summary of Claimed Subject Matter

Independent Claims 1, 7 and 15 of the present application pertains to a method and apparatus for routing communications to a storage area network.

At least one embodiment of Claim 1, is depicted in Figures 2 -5. For example, first program code (302 of Figure 3 and at least page 7 paragraph [0018]) to determine a route path through a gateway (212 of Figure 2 and at least page 6 paragraph [0015]) to a storage area network (SAM) (110 of Figure 1 and at least page 5 paragraphs [0011]-[0013]) for each of a plurality of addresses (502 of Figure 5) of an interface of a server (100 of Figure 1 and at least page 5 paragraph [0011]. Claim 1 further features [t]he first program code (302 of Figure 3 and at least page 7 paragraph [0018]) to determine a particular route path from the plurality of route paths by applying an algorithm (at least page 10 paragraph [0027]) to one or more numerical values associated with a particular addresses that is one of the plurality of addresses, as recited in Claim 1, is described at least at page 10 paragraph [0027] and 504 of Figure 5. Claim 1 further comprises a [s]econd program code (302 of Figure 3 and at least page 7 paragraph [0018]) to configure the gateway with the particular route path, described throughout the Figures and Specification including 506 of Figure 5 and page 11 paragraph [0029].

In Claim 7, "A system" is described and shown in Figures 2, 3 and 4. In one embodiment, Claim 7 features a server 110 including a first interface 102 described at least in Figure 2 and paragraph [0015] of page 6. Claim 7 also features a first gateway 212 communicatively coupled to the first interface 102, the first gateway 212 comprising a first gateway interface 102 to a storage area network (SAN) 110 (of Figure 1), a second gateway interface 104 to the SAN 110, and first configuration information, the first gateway 212 to route a network communication received from the first interface 102, based on the first configuration information, to one of the first gateway interface 102 and the second gateway interface 104 described at least in Figures 1 and 2 and paragraphs [0015] and [0016] of page 6. In addition, at Figure 3 and paragraph [0018], logic 302, communicatively coupled to the first gateway 212, to determine a route path through the first gateway 212 for each of a plurality of addresses of the first interface 102, the logic 302 to determine a particular route path by applying an algorithm to one or more numerical values associated with the particular address from the plurality of addresses and to configure the first configuration information with the particular route path, wherein the particular route path is one of the route paths determined for the plurality of addresses; described at least in Figures 3 and 4 and paragraphs [0021] through [0023] of page 9. Claim 7 further features a storage device 120 comprising a

first storage device interface 122 and a second storage device interface 124, the first storage device interface 122 communicatively coupled to the first gateway interface 312 and the second storage device interface 124 communicatively coupled to the second gateway interface 314; described at least in Figure 3 and paragraph [0019] of page 8.

In Claim 15, “a method” is recited. At least one embodiment is depicted in Figure 5 with further references to Figures 1-4. For example, “[d]etermining a first address of an interface of a server and a second address of the interface of the server” described at least at Figures 1 and 2 and at least page 5 paragraph [0011]-page 6 paragraph [0015]. [d]etermining a first route path for the first address by applying an algorithm to one or more numerical values associated with the first address; described at 502 of Figure 5 and at least page 5 paragraph [0011] and page 10 paragraph [0026]. [d]etermining a second route path for the second address by applying the algorithm to one or more numerical values associated with the second address described at least at page 10 paragraph [0027] and 504 of Figure 5. [c]onfiguring a gateway between the interface and a storage area network (SAN) with the first route path and the second route path, described throughout the Figures and Specification including 506 of Figure 5 and page 11 paragraph [0029].

VI. Grounds of Rejection to Be Reviewed on Appeal

1. Claims 1-20 stand rejected under 35 USC 103(a) as being unpatentable over Ovadia (US Pub. No. 2005/0175341) in view of Srikrihna et al. (US Pub. No. 2005/0129005; hereinafter "Srikrihna").

VII. Argument

1. Whether Claims 1-20 are unpatentable under 35 U.S.C. § 103(a) over Ovadia in view of Srikrihna.

Appellants respectfully submit that the rejection of the Claims is improper as the rejection of Claims 1-20 does not satisfy the requirements of a *prima facie* case of obviousness as claim features are not met by the cited reference.

Moreover, prior to presenting the Appellants rationale that Claims 1-20 are not rendered obvious by Ovadia or Srikrihna, alone or in combination; Appellants respectfully point out the following inconsistencies with respect to the Final Office Action dated 5/22/2007. In conjunction, the Appellants have provided their “best interpretation” of the inconsistencies in an attempt to reduce any further confusion that could have otherwise occurred with respect to the present response.

Based on Appellants’ best understanding of the Final Office Action dated 5/22/2007, as provided on 2 item 4. second paragraph, Appellants submit that the entire rejection from the non-final rejection dated 12/06/2006 is incorporated by reference and the present Final Office Action dated 5/22/2007 includes only the response to the Appellants previous Amendments and Responses.

As such and for clarification purposes, throughout the present Appeal Brief, any reference by the Appellants to any rejection will include the appropriately dated Office Action therewith.

In addition, based on the Amendments provided in response to the non-final Office Action dated 12/06/2006, and the lack of any additional rejection of record based on the Amendments in the present Final Office Action dated 5/22/2007, Appellants must assume that the Amendments were overlooked in the Final Office Action dated 5/22/2007.

Furthermore, as pointed out in the response to the Office Action dated 12/06/2006, Appellants again respectfully point out that the present Final Office Action also does not cite any formal and specific rejection for the claim sets 7-14 and 15-20. Instead, each of the Office Actions merely provide a statement about the similarity of the Claim sets and then a nebulous statements, “except for a method comprising server interfaces, LUN, Modulo sum, etc... instead of the machine readable media having program codes, LUN, server interfaces,

etc... as well as system comprising server interfaces, gateways, LUN, switches, fibre channel, SCSI interface, etc..." therefore, these claims are also rejected under the same rationale applied against claims 1-6."

As such, Appellants respectfully submit that the rejections of the Claims in the final Office Action is incomplete. Specifically, the Final Office Action does not address or provide any rejection based on the structure of the system as provided in Claims 7-14 or the method as provided in Claims 15-20. Accordingly, Appellants respectfully submit that the rejection of Claims 7-20 under 35 U.S.C. § 103(a) herein is incomplete and as such, Claims 7-20 are presently allowable. Moreover, although there are quite a few features provided in Claims 7-20 which are not addressed in the present Office Action, Appellants have provided additional arguments with respect to the allowability of the features of Claims 7-20 herein.

For clerical purposes, Appellants respectfully point out that both Office Actions referred to herein utilize the incorrect term "column" when referring to the cited art instead of the appropriate term "page".

Claims 1-20

A. Claim Features are not Met by the Cited References

Appellants respectfully submit that the rejection of Claims 1-20 is improper as the rejection of Claims 1-20 does not satisfy the requirements of a *prima facie* case of obviousness as claim features are not met by the cited reference.

The Appellants have reviewed the cited references and respectfully submit that the present invention as recited in Claims 1-20 are not rendered obvious by Ovadia or Srikrihna, alone or in combination.

To establish *prima facie* obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). (MPEP 2143.03).

Furthermore, Appellants respectfully point out that in order to establish a *prima facie* case of obviousness, the prior art must suggest the desirability of the claimed invention (MPEP 2142). "[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to

make the proposed amendment” (emphasis added) (MPEP 2143.01; *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Appellants respectfully submit that Claim 1 (and similarly Claims 7 and 15) include the feature “the first program code to determine a particular route path by applying an algorithm to one or more numerical values associated with a particular address that is one of the plurality of addresses” (emphasis added).

Appellants respectfully agree with the statement on page 2 of the non-final Office Action dated 12/06/2006 to which the present Final Office Action refers; e.g., to the effect that Ovadia does not teach an algorithm to one or more numerical values associated with the address.

However, the Appellants respectfully disagree with the non-final Office Action dated 12/06/2006 that cites Srikrihna as teaching this feature as well as the provided motivation and reason for the combination, for the reasons below.

The Office Action of 12/06/2006 asserts, in part, that: Ovadia substantially teaches the invention. In general, the Office Action states - At least one machine-readable [col. 18, claim 39] media comprising: first program code to determine a route [routing abstract, col.13, par. 163] path through a gateway to a storage area network (SAN) for each of a plurality of addresses of an interface of a server [abstract, fig. 2, col. 18, claims 30-31 and 42]; - the first program code to determine the route path [fig. 2, col. 7, par. 85]; - second program code to configure the gateway with the route paths [fig. 2, col. 7, par. 90; col. 8, par. 103-104].

The Office Action continues on and admits that Ovadia ““does not explicitly address:’ -an algorithm to one or more numerical values associated with the address.”

Appellants respectfully point out that, the claimed feature actually states, “the first program code to determine a particular route path by applying an algorithm to one or more numerical values associated with a particular address that is one of the plurality of addresses” (emphasis added).

The Office Action then states that Ovadia discloses a method and system of routing data that includes virtual circuit networking algorithm, data sizing via specific burst algorithm, data traffic shaping algorithm, etc (emphasis added). In fact, Appellants

respectfully point out that Ovadia is directed toward optical networking between server area networks and storage area networks.

Specifically, Appellants respectfully state that while Ovadia teaches “routing” as the present Office Action states, the routing of Ovadia includes an external gateway protocol (EGP) including fibre channel frame packaging encapsulated by photonic burst-switched (PBS) frames for transmitting data (abstract). Moreover, on page 6 paragraph [0074] Appellants understand Ovadia to teach a data burst scheduler for transmission over the PBS network. The data burst scheduler utilizing an offset time from an offset manager; wherein the offset manager determines the offset utilizing parameters such as: the number of hops along a lightpath, the processing delay, traffic loads, class of service requirements, etc.

In contrast, the present features recite “the first program code to determine a particular route path by applying an algorithm to one or more numerical values associated with a particular address that is one of the plurality of addresses” (emphasis added). As such, Appellants respectfully submit that there would be no motivation or reasoning for modifying Ovadia to include the claimed feature.

Specifically, there is no weight to the argument that the claimed functionality of an algorithm based on one or more numerical values associated with a particular address would benefit Ovadia, when, as clearly stated on page 3 of the Office Action dated 12/06/2006, at least three algorithms are already being utilized by Ovadia to provide a routing solution (emphasis added).

With respect to Srikrishua, as stated on pages 3-4 of the Office Action dated 12/06/2006, “Srikrishua explicitly teaches: -A method, computer readable medium, and apparatus for determining an optimal routing based upon path quality of routes in a mess network including gateways, servers, storage area networks (SAN) or mass storage device [abstract, fig. 1-4, col. 1, par. 0002; col. 5, par. 0061] comprising:- a control algorithm used via routing path quality, data latency variable, data transmission QOS, routing statistic via data packet addresses [col. 6, par.0076-0081] as well as a first, second, third routing measurement determination [fig. 5, col. 5, par. 0063-0070].

Again, in contrast, the present features recite “the first program code to determine a particular route path by applying an algorithm to one or more numerical values associated with a particular address that is one of the plurality of addresses” (emphasis added). As such, Appellants respectfully submit that there would be no motivation or reasoning for modifying Srikrishua to include the claimed feature.

Specifically, there is no weight to the argument that the claimed functionality of an algorithm based on one or more numerical values associated with a particular address would benefit Srikrishua, when, as clearly stated on pages 3 and 4 of the Office Action dated 12/06/2006, at least three variables and three routing measurements are already being utilized by Srikrishua to provide a routing solution (emphasis added).

Thus, Appellants respectfully submit that there is no rational underpinning to support the legal conclusion of obviousness provided by the present Office Action. In fact, Appellants respectfully submit that both Ovadia and Srikrihna indicate distinctly different approaches for selecting a particular route path. Therefore, Appellants respectfully submit that the differences between the three various routing approaches would not have prompted a person of ordinary skill in the relevant field to combine the elements in the way the instant Claims require. As such, Appellants respectfully submit that the present rejection rests on speculation and less than a preponderance of evidence and thus, fails to provide sufficient reasons for finding Claims 1, 7 and 15 unpatentable for obviousness under 35 U.S.C. § 103(a) over Ovadia and Srikrihna.

As such, Appellants respectfully submit that neither Ovadia nor Srikrihna, nor the combination thereof, show or suggest “the first program code to determine a particular route path by applying an algorithm to one or more numerical values associated with a particular address that is one of the plurality of addresses” as recited in independent Claims 1, 7 and 15. Accordingly, Appellants respectfully submit that the basis for rejecting Claims 1, 7 and 15 under 35 U.S.C. § 103(a) is traversed.

Moreover, Appellants respectfully submit that Claims 2-6, 8-14 and 16-20 depend on Independent Claims 1, 7 and 15 and recite additional features thereof. Accordingly, Appellants respectfully submit that the rejection of Claims 2-6, 8-14 and 16-20 under 35 U.S.C. § 103(a) is also improper and should be reversed.

Claims 15-20

Applicants respectfully submit that Claim 15 states “A method comprising:
determining a first address of an interface of a server and a second address of the interface of the server;

determining a first route path for the first address by applying an algorithm to one or more numerical values associated with the first address;

determining a second route path for the second address by applying the algorithm to one or more numerical values associated with the second address; and

configuring a gateway between the interface and a storage area network (SAN) with the first route path and the second route path” (emphasis added).

Appellants respectfully agree with the statement on page 2 of the non-final Office Action dated 12/06/2006 to which the present Final Office Action refers; e.g., to the effect that Ovadia does not teach an algorithm to one or more numerical values associated with the address. In addition, Appellants respectfully submit that if Ovadia does not teach the algorithm once, then Ovadia would logically not teach using an untaught algorithm twice.

Moreover, as previously stated herein, Appellants respectfully submit that while Ovadia teaches “routing” as the present Office Action states, the routing of Ovadia includes an external gateway protocol (EGP) including fibre channel frame packaging encapsulated by photonic burst-switched (PBS) frames for transmitting data (abstract). Moreover, on page 6 paragraph [0074] Appellants understand Ovadia to teach a data burst scheduler for transmission over the PBS network. The data burst scheduler utilizing an offset time from an offset manager; wherein the offset manager determines the offset utilizing parameters such as: the number of hops along a lightpath, the processing delay, traffic loads, class of service requirements, etc.

As such, there is no weight to the argument that the claimed functionality would benefit Ovadia, when, as clearly stated on page 3 of the Office Action dated 12/06/2006, at least three algorithms are already being utilized by Ovadia to provide a routing solution (emphasis added).

With respect to Srikrishua, as stated on pages 3-4 of the Office Action dated 12/06/2006, “Srikrishua explicitly teaches: -A method, computer readable medium, and apparatus for determining an optimal routing based upon path quality of routes in a mess network including gateways, servers, storage area networks (SAN) or mass storage device [abstract, fig. 1-4, col. 1, par. 0002; col. 5, par. 0061] comprising:- a control algorithm used via routing path quality, data latency variable, data transmission QOS, routing statistic via data packet addresses [col. 6, par.0076-0081] as well as a first, second, third routing measurement determination [fig. 5, col. 5, par. 0063-0070].

Again, in contrast, the present features of Claim 15 recite “determining a first route path for the first address by applying an algorithm to one or more numerical values associated with the first address; determining a second route path for the second address by applying the algorithm to one or more numerical values associated with the second address” (emphasis

added). As such, Appellants respectfully submit that there would be no motivation or reasoning for modifying Srikrishua to include the claimed feature.

Specifically, there is no weight to the argument that the claimed functionality would benefit Srikrishua, when, as clearly stated on pages 3 and 4 of the Office Action dated 12/06/2006, at least three variables and three routing measurements are already being utilized by Srikrishua to provide a routing solution (emphasis added).

Thus, Appellants respectfully submit that there is no rational underpinning to support the legal conclusion of obviousness provided by the present Office Action. In fact, Appellants respectfully submit that both Ovadia and Srikrihna indicate distinctly different approaches for selecting a particular route path. Therefore, Appellants respectfully submit that the differences between the three various routing approaches would not have prompted a person of ordinary skill in the relevant field to combine the elements in the way the instant Claims require. As such, Appellants respectfully submit that the present rejection rests on speculation and less than a preponderance of evidence and thus, fails to provide sufficient reasons for finding Claim 15 unpatentable for obviousness under 35 U.S.C. § 103(a) over Ovadia and Srikrihna.

As such, Appellants respectfully submit that neither Ovadia nor Srikrihna, nor the combination thereof, show or suggest “determining a first route path for the first address by applying an algorithm to one or more numerical values associated with the first address; determining a second route path for the second address by applying the algorithm to one or more numerical values associated with the second address” as recited in independent Claim 15. Accordingly, Appellants respectfully submit that the basis for rejecting Claim 15 under 35 U.S.C. § 103(a) is traversed.

Again, Appellants respectfully submit that Claims 16-20 depend on Independent Claim 15 and recite additional features thereof. Accordingly, Appellants respectfully submit that the rejection of Claims 2-6, 8-14 and 16-20 under 35 U.S.C. §103(a) is also improper and should be reversed.

In summary, Appellants respectfully submit that the Examiner’s rejections of the Claims are improper as the rejection of Claims 1-20 does not satisfy the requirements of a *prima facie* case of obviousness as claim features are not met by the cited reference. Accordingly, Appellants respectfully submit that the rejection of Claims 1-20 under 35 U.S.C. §103(a) is improper and should be reversed.

Claims 3-5, 10 and 17

Applicants respectfully submit that Claims 3-5, 10 and 17 include the feature “modulo two of the sum.”

Appellants respectfully agree with the statement on page 7 of the non-final Office Action dated 12/06/2006 to which the present Final Office Action refers; e.g., to the effect that “Ovadia does not explicitly address: -modulo two of the sum.”

Moreover, on page 8 of the non-final Office Action dated 12/06/2006, the Office Action states “the modulo two of the sum feature is obvious embedded and used therein in order to achieve the best routing results for the SAN data communication. This is further obvious because this function is notoriously well known in the art of data computing arena, such as data routing and configuration networking environment for the same reasons set forth as described in claim 1, *supra*.”

“It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection is based” (emphasis added; MPEP 2144.03(E); See *In re Zurko*, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001); *In re Ahlert*, 420 F.2d 1088, 1092, 165 USPQ 418, 421 (CCPA 1970)). The “assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support” (MPEP 2144.03(A); *In re Zurko*, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001)). In particular, “[i]f such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge” (MPEP 2144.03(B); see *In re Soli*, 317 F.2d 941, 946, 37 USPQ 797, 801 (CCPA 1963); see also *In re Chevenard*, 139 F.2d 711, 713, 60 USPQ 239, 201 (CCPA 1943)).

Accordingly, Appellants respectfully that the Examiner provide adequate evidence in the form of an affidavit in support of the finding of “as is known”, in accordance with 37 CFR § 1.104(d)(2).

Regarding the response to Arguments provided in the Final Office Action dated 5/22/07, Appellants are submitting the following remarks in response. In these remarks, Appellants are addressing certain arguments presented in the Response to Remarks Section. While only certain arguments are addressed, this should not be construed that Appellants agree with the other arguments presented in the Response to Remarks Section.

At item A “first” of page 3, the Examiner makes an entire paragraph stating that the information is not recited in the rejected claim. However, on the next page, the Examiner points out that the entire paragraph is directed merely toward a missing word e.g., “the first program ‘code’.” Furthermore, on page 4 at item ‘third’, the third line also mistakenly overlooks the exact same word.

At item “fourth” on page 5, the Examiner addresses a portion of the Amended Claims from the previous response, but does not actually address the entire Claim amendments.


In summary, Appellants respectfully submit that the Examiner’s rejections of the Claims are improper as the rejection of Claims 1-20 does not satisfy the requirements of a *prima facie* case of obviousness as claim features are not met by the cited reference. Accordingly, Appellants respectfully submit that the rejection of Claims 1-20 under 35 U.S.C. §103(a) is improper and should be reversed.

Conclusion

Appellants believe that pending Claims 1-20 are directed toward patentable subject matter. In particular, Appellants believe that pending Claims 1-20 are patentable over Ovadia in view of Srikrihna. As such, Appellants submit that Claims 1-20 are patentable over the cited references.

Appellant respectfully requests that the rejection of Claims 1-20 be reversed. The Appellant wishes to encourage the Examiner or a member of the Board of Patent Appeals to telephone the Appellant's undersigned representative if it is felt that a telephone conference could expedite prosecution.

Respectfully submitted,
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Dated: 09/26/2007

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VIII. Appendix - Clean Copy of Claims on Appeal

1. (previously presented) At least one machine-readable media comprising:
first program code to determine a route path through a gateway to a storage area network (SAN) for each of a plurality of addresses of an interface of a server, the first program code to determine a particular route path from the plurality of route paths by applying an algorithm to one or more numerical values associated with a particular address that is one of the plurality of addresses; and
second program code to configure the gateway with the particular route path.
2. (original) The media of claim 1, wherein each of the addresses comprises an interface card number, a target number, and a logical unit number (LUN) and wherein the first program code determines the route path for each of the addresses by applying the algorithm to the interface card number, the target number, and the LUN.
3. (original) The media of claim 2, wherein the first program code determines the route path by summing the interface card number, the target number and the LUN, and taking a modulo of the sum.
4. (original) The media of claim 2, wherein the first program code takes a modulo two of the sum.
5. (original) The media of claim 4, wherein the second program code configures the gateway to route to a first interface of the gateway if the modulo two of the sum is equal to zero, and otherwise configures the gateway to route to a second interface of the gateway.
6. (original) The system of claim 1, further third program code to determine the plurality of addresses based on configuration information of the server.
7. (previously presented) A system comprising:
a server including a first interface;
a first gateway communicatively coupled to the first interface, the first gateway comprising a first gateway interface to a storage area network (SAN), a second gateway interface to the SAN, and first configuration information, the first gateway to route a network communication received from the first interface, based on the first configuration information, to one of the first gateway interface and the second gateway interface;

logic, communicatively coupled to the first gateway, to determine a route path through the first gateway for each of a plurality of addresses of the first interface, the logic to determine a particular route path by applying an algorithm to one or more numerical values associated with the particular address from the plurality of addresses and to configure the first configuration information with the particular route path, wherein the particular route path is one of the route paths determined for the plurality of addresses; and a storage device comprising a first storage device interface and a second storage device interface, the first storage device interface communicatively coupled to the first gateway interface and the second storage device interface communicatively coupled to the second gateway interface.

8. (original) The system of claim 7, wherein the server further comprises a second interface and the system further comprises:

a second gateway, communicatively coupled to the second interface and to the logic, the second gateway comprising a third gateway interface to the SAN communicatively coupled to the first storage device interface, a fourth gateway interface to the SAN communicatively coupled to the second storage device interface, and second configuration information, the second gateway to route a network communication received from the second interface based on the second configuration information to one of the third gateway interface and the fourth gateway interface; and

wherein the logic is further to determine a second route path through the second gateway for each of a plurality of addresses of the second interface by applying the algorithm to one or more numerical values associated with the address of the second interface, and to configure the second configuration information with the second route paths.

9. (original) The system of claim 7, wherein each of the addresses comprises an interface card number, a target number, and a logical unit number (LUN) and wherein the logic determines the route path for each of the addresses by applying the algorithm to the interface card number, the target number, and the LUN for each of the addresses.

10. (original) The system of claim 9, wherein the logic determines the route path for each of the addresses by summing the interface card number, the target number and the LUN, and taking the modulo two of the sum.

11. (original) The system of claim 7, further comprising:
a first switch, communicatively coupled between the first gateway interface and the first storage device interface, the first switch to route network communications received from the first gateway interface to the first storage device interface;

a second switch, communicatively coupled between the second gateway interface and the second storage device interface, the second switch to route network communications received from the second gateway interface to the second storage device interface.

12. (original) The system of claim 7, wherein the storage device comprises a disk array.

13. (original) The system of claim 7, wherein the first gateway includes a Fibre Channel to Small Computer Systems Interface (SCSI) converter.

14. (original) The system of claim 7, wherein the first interface is a SCSI card.

15. (original) A method comprising:
determining a first address of an interface of a server and a second address of the interface of the server;
determining a first route path for the first address by applying an algorithm to one or more numerical values associated with the first address;
determining a second route path for the second address by applying the algorithm to one or more numerical values associated with the second address; and
configuring a gateway between the interface and a storage area network (SAN) with the first route path and the second route path.

16. (original) The method of claim 15, wherein determining a first route path comprises applying the algorithm to an interface card number, a target number and a logical unit number (LUN) associated with the first address.

17. (original) The method of claim 16, wherein applying the algorithm comprises summing the interface card number, the target number and the LUN, and taking the modulo two of the sum.

18. (original) The method of claim 15, wherein:
the first address comprises a first logical unit number of a first target of the interface and the second address comprises a second logical unit number of the first target;
determining the first route path comprises determining a route path to the first interface of a storage device; and
determining the second route path comprises determining a route path to the second interface of a storage device.

19. (original) The method of claim 15, further comprising:
receiving a third address of a second interface of the server;
determining a third route path for the third address by applying the algorithm to one
or more numerical values associated with the third address; and
configuring the gateway with the third route path.

20. (original) The method of claim 15, wherein determining a first route path
comprises determining an interface of the gateway to route communications received from
the first address.

IX. Evidence Appendix

No evidence is herein appended.

X. Related Proceedings Appendix

No related proceedings.